Chesapeake Bay Total Maximum Daily Load

Baltimore County, Maryland Comments

The draft Chesapeake Bay Total Maximum Daily Load, Appendices, and support model documentation, presents a comprehensive overview and analysis of the nutrient and sediment impacts to the Chesapeake Bay and the amount of reductions necessary to achieve water quality standards. The EPA Chesapeake Bay Program is congratulated on the progress made to date.

There are still a number of remaining concerns regarding the model and need for future improvement.

- **Urban land use**: The urban land use changed markedly between the Phase 5.2 and Phase 5.3 Watershed Model results. There was a considerable decrease in urban land, primarily in the low-density pervious urban category. This needs to be corrected in future model runs with input from not only the states, but from local government. While Baltimore County agrees that the urban land use acreage in the Phase 5.3 model is low, the Maryland State Department of Planning urban land use acreage is too high. This low-density residential, in particular has too high an acreage of pervious urban land. In the process of preparing the Water Resources Element, Baltimore County found that as much as 30% of the low-density residential was actually forest cover.
- **Urban Loading Rates:** The Phase 5 Model does break out high density and low-density urban pervious and impervious land cover, which is an improvement over the Phase 4 Model. This improvement in the Model is negated by having practically identical nitrogen and phosphorus loadings for low-density and high-density impervious and pervious cover. The low-density impervious cover has a lower percentage of directly connected impervious, with open channel drainage, sheet flow over pervious land, and few storm drain systems. This will result in not only some treatment of the urban drainage, but will also reduce the amount of storm flow in the streams. The low-density pervious urban will be less compacted than the high-density pervious urban and will allow greater infiltration and treatment of storm water runoff. The urban loading rates need to be adjusted to account for the differences between high-density urban and low-density urban.
- **Upland Erosion Versus Stream Erosion:** A greater effort needs to be made to differentiate between nutrient and sediment sources attributed to upland erosion versus stream erosion. This differentiation is necessary to better target restoration efforts. If a significant portion of the load is due to stream erosion (due to legacy sediments, or stream adjustment to increased impervious area), then the focus solely on upland Best Management Practices will fall short of meeting the nutrient and sediment reductions needed to meet tidal water quality standards.
- **Shoreline Erosion:** While mentioned in the TMDL document, there is no loading ascribed to this source. Given the immediate proximity of shorelines to shallow water habitat and the detrimental effect of sediment on water clarity and

the ability to support SAVs, greater effort needs to made to quantify the amount sediment, phosphorus, and nitrogen from this source.

The **draft Phase II WIP** is scheduled to be submitted to EPA by June 1, 2011. This time frame is too short to be able to compile a Watershed Implementation Plan given the number of stakeholders involved at the local level. The time frame for the draft submittal should be extended to September 1, 2011 with the final in place by December 31, 2011.